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[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven
(NL). VAN PIETERSON, Liesbeth [NL/NL]; c/o Prof.
Holstlaan 6, NL-5656 AA Eindhoven (NL).

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(74) Agents: VAN WERMESKERKEN, Stephanie, C. et al.;
Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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(71) Applicant (*for all designated States except US*): KONIN-
KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

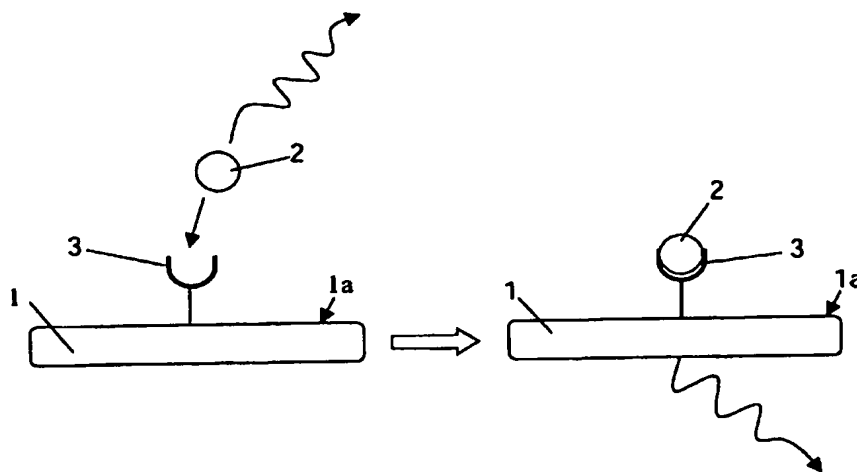
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(72) Inventors; and

(75) Inventors/Applicants (*for US only*): VINK, Teunis, J.

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(54) Title: OPTICAL NANOWIRE BIOSENSOR BASED ON ENERGY TRANSFER



(57) **Abstract:** The present invention relates to the use of the optical properties of nanowires (1) for biomolecule (2) detection. The advantages of using nanowires (1) are a high specific surface area (1a) to bind receptor molecules (3) and size dependent optical properties because of strong quantum confinement of the carriers, i.e. nanowires (1) with different diameters show different colours. The proposed transduction mechanism is based on energy transfer between the biomolecule (2) and the nanowire (1) (or vice versa). Preferably, the target biomolecule (2) is a luminescent biomolecule (2), or said biomolecule (2) is labelled with a dye for quenching of the luminescence of the nanowire (1).